factors. Similarly, whether an obesity paradox and an obese-smoker double paradox exist in this patient cohort is not clear.

METHODS 5924 patients who underwent PCIs for ACS in two hospitals were analyzed. Statistical analyses were performed to analyze the respective relationship between smoking status and obesity (BMI >= 30 kg/m2) and both in-patient and late mortality outcomes following PCI. In addition, we used an interaction model to analyze the interaction between smoking and obesity on subsequent mortality outcomes.

RESULTS Of the 5924 PCIs, 1086 were performed on patients who were smokers. In unadjusted analyses, adverse late mortality outcomes (mean 2.5 years follow-up) in smokers were significantly lower compared to non-smokers (p<0.01). After propensity score-adjustment, late mortality was not significantly different between the two groups (HR 0.63, 95% CI 0.40-1.01, p=0.06). Of the 5924 PCIs, 2076 were performed on patients who were obese. In unadjusted analyses, adverse late mortality outcomes (mean 2.5 years follow-up) in obese patients were significantly lower than they were in non-obese patients (p<0.01). After propensity score-adjustment, obese patients' late mortality outcomes were not significantly different than patients with BMI < 30 (HR 0.98, 95% CI 0.70 - 1.37). Furthermore, we found no significant interaction between smoking status and BMI on late mortality (p=0.82).

Unadjusted Analysis of Short- and Long-Term Mortality in Smokers Undergoing PCI		
Outcomes	**Risk (Smokers vs. Non-Smokers)**	**P-Value**
In-Patient Mortality	OR 0.71 (95% CI 0.25 – 2.04)	0.53
Long Term Mortality	OR 0.53 (95% CI 0.34 – 0.84)	<0.01
Propensity Score-Adjusted Analysis		
In-Patient Mortality	OR 0.77 (95% CI 0.26 – 2.27)	0.63
Long Term Mortality	HR 0.63 (95% CI 0.40 – 1.01)	0.06
Unadjusted Analysis of Short- and Long-Term Mortality in Obese Patients Undergoing PCI		
Outcomes	**Risk (Obese vs. Non-Obese)**	**P-Value**
In-Patient Mortality	OR 0.58 (95% CI 0.27 – 1.22)	0.65
Long Term Mortality	OR 0.63 (95% CI 0.45 – 0.87)	<0.01
Propensity Score-Adjusted Analysis		
In-Patient Mortality	OR 0.70 (95% CI 0.30 – 1.68)	0.43
Long Term Mortality	HR 0.98 (95% CI 0.70 – 1.37)	0.90

Propensity score model included sex, hypertension, diabetes mellitus, prior CABG, history of heart failure, history of cerebrovascular disease, history of peripheral artery disease, history of valve surgery, history of chronic lung disease, estimated GFR <60 cc/min/1.73 m², use of bivalirudin during PCI, use of glycoprotein inhibitor during PCI, history of LV systolic dysfunction.

CONCLUSIONS We did not find evidence of a smoker's paradox, obesity paradox or an obese-smoker double paradox for early and late mortality outcomes post-PCI. Existence of such paradox in the prior literature might be explained by confounding factors.

CATEGORIES CORONARY: PCI Outcomes

KEYWORDS Obesity, PCI - Percutaneous Coronary Intervention, Smokers paradox

TCT-456

Abstract Withdrawn

TCT-457

Assessment of Optimal Drug-Eluting Stent Expansion to prevent target lesion revascularization with OCT guidance.

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BACKGROUND Recent studies have demonstrated that optimal coherence tomography (OCT) guided percutaneous coronary intervention (PCI) was useful to prevent major adverse cardiac events after PCI. However, optimal Drug-eluting stent (DES) expansion using OCT has not been established yet. The aim of this study to assess optimal DES expansion at post stenting to prevent target lesion revascularization (TLR) at 8-month follow-up.

METHODS Until May 2015, we performed OCT guided DES implantation and 8 months follow-up coronary angiography in 91 patients. There were 14 TLRs (15.4%) including 6 in-stent and 8 stent edge restenosis (4 proximal, 4 distal). After excluding 1 stent edge restenosis due to stent edge injury, 13 TLRs were analyzed in this study (TLR, N=13; non-TLR, N=77). Lipid rich plaque (defined by lipid occupying ≧2 quadrants of the cross-section area), thin cap fibroatheroma (TCFA ,defined as lipid-rich plaque with fibrous cap thickness ≦65μm) , plaque calcification, and thrombus (defined as an irregular mass protruding into the lumen with dimension ≧200 μm) were measured at pre PCI. Minimal stent area (MSA), % stent expansion, stent symmetry, and tissue protrusion were measured at post PCI.

RESULTS There were no significant differences in clinical characteristics between groups, except age (TLR was younger than non-TLR; 64±11 vs 71±9, P=0.02). TCFA and lipid rich plaque were lower in TLR than in non-TLR (7.7% vs 23%, P=0.12; 30% vs 45%, P=0.18). There were no significant differences in plaque calcification, thrombus, % stent expansion, stent symmetry, and existence of tissue protrusion between TLR and non-TLR (46% vs 54%; 0.33%, 15% vs 14%; 0.42%, 85.1%±27.3% vs 96.5%±28.5%, P=0.13;0.85±0.08 vs 0.85±0.08, P=0.86; 30% vs 22%, P=0.50). MSA was significantly smaller in TLR than in non-TLR (4.3±1.9 vs 5.7±1.6, P<0.01). On multivariable analysis, Age and MSA were independent predictors of TLR (OR 1.11, 95% CI 1.02-1.24, P=0.02; OR=2.58: 95%CI 1.14-7.68, P=0.04). The best cut-off value to prevent TLR was 4.7mm2 (sensitivity 74%, specificity 77%, positive predict value 95%, negative predict value 33.3%).

CONCLUSIONS OCT guided DES expansion during PCI may be useful to prevent TLR. The optimal MSA at post procedure to prevent TLR was 4.7mm2.

CATEGORIES CORONARY: PCI Outcomes

KEYWORDS Drug-eluting stent, OCT, Target lesion revascularization

TCT-458

Differential Effect of Side Branch Intervention on Long-term Clinical Outcomes According to Side Branch Stenosis after Main Vessel Stenting: Results from the COBIS (Coronary Bifurcation Stenting) II Registry

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BACKGROUND Indication of side branch (SB) intervention after main vessel (MV) stenting is not established in coronary bifurcation lesions. This study sought to investigate differential effect of SB intervention on long-term clinical outcomes according to SB stenosis after MV stenting.

METHODS In the Coronary Bifurcation Stenting II Registry, 2,897 patients undergoing percutaneous coronary intervention using drug-eluting stents for bifurcation lesions with SB ≥2.3 mm were enrolled. We selected 2,017 patients treated with 1-stent technique or MV stenting first strategy. Patients undergoing SB intervention after MV stenting (SB intervention group, n=929) were compared to those not after MV stenting (no-SB intervention group, n=1,088) in terms of cardiac death or myocardial infarction (MI).

RESULTS During a median follow-up duration of 37 months, the cumulative rate of cardiac death or MI tended to occur less frequently in the SB intervention group than in the no-SB intervention group (1.8 % versus 2.9%; adjusted HR 0.56; 95% CI 0.29 to 1.07; p=0.08). There was significant interaction between SB intervention and SB stenosis after MV stenting. Of 1,077 patients with diameter stenosis of SB ≥50% after MV stenting, SB intervention was associated with a lower risk of cardiac death or MI (1.2% versus 4.2%; adjusted HR 0.22; 95% CI 0.09 to 0.52; p=0.001). However, among 940 patients with diameter stenosis of SB <50%, there was no significant difference in cardiac death or MI (3.5% versus 2.2%; adjusted HR 1.36; 95% CI 0.58 to 3.20; p=0.48) between the SB intervention group and the no-SB intervention group. Rate of target lesion revascularization was not significantly different between the 2 groups regardless of SB stenosis.

CONCLUSIONS Effect of SB intervention differs according to SB stenosis after MV stenting. SB intervention may reduce cardiac death or MI in bifurcation lesions with diameter stenosis of SB ≥50% after MV stenting.

CATEGORIES CORONARY: PCI Outcomes

KEYWORDS Bifurcation lesion, Side branch, Stenosis